

Notice of Allowability

Application No.

10/600,956

Examiner

D. Jacob Davis

Applicant(s)

KINNETT, J. GREGORY

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an election and restriction entered 8/3/04.
2. ☒ The allowed claim(s) is/are 9-29.
3. ☒ The drawings filed on 6/20/03 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 9/22/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Margaret A. Boulware on September 23, 2004.

The application has been amended as follows:

9. (Currently amended) An orthopedic surgical ~~instrument~~ system for resection of a distal end of a femur and a proximal end of an adjacent tibia in preparation for implantation of an orthopedic joint replacement, the instrument comprising:

(a) an intermedullary support comprising an alignment rod having a tapered portion terminating at a first end thereof and defining a longitudinal axis therethrough, the rod axially insertable into the distal medullary cavity of the femur and having an outer surface adapted to engage the femur whereby the rod is alignable within the femur and provides a surgical reference point, the rod having a second end extending a distance beyond the distal femur;

(b) a cutting guide adjustably mountable to the second end of the rod and positionable about the distal end of the femur, the cutting guide having a plurality of femoral blade slots

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therethrough, each femoral blade slot adapted to operatively receive a blade whereby the blade is guided to perform osteotomies;

(c) a tibial guide adjustably mountable to the second end of the rod, non-simultaneously with the cutting guide, and positionable about the proximal end of the tibia, the tibial guide having a plurality of tibial blade slots therethrough, each tibial blade slot adapted to operatively receive a blade whereby the blade is guided to perform osteotomies; and

(d) a tibial locking arm slidably movable along the tibial guide and adapted to engage the proximal end of the tibia whereby the tibia is secured perpendicular to the femur.

10. (Currently amended) The instrument system of claim 9, wherein the tapered portion of the rod defines a plurality of longitudinal slots therethrough positioned radially thereabout, and wherein the support further comprises a plurality of longitudinal roller bearings and a shaft located in the rod, each roller bearing located in a one of the longitudinal slot slots and movable therein between a collapsed position and an expanded position wherein at least a portion of each roller bearing extends beyond the outer surface of the rod in the expanded position, the shaft axially drivable in the rod and adapted to engage the roller bearings, wherein axial advancement of the shaft moves the roller bearings to the expanded position thereby extending the roller bearings into the femur whereby the support is anchored therein in coaxial alignment therewith, and wherein axial retraction of the shaft moves the roller bearings to the collapsed position thereby releasing the roller bearings from the femur whereby the rod is axially removable from the femur.

11. (Currently amended) The ~~instrument~~ system of claim 9, wherein the cutting guide comprises a guide member mountable on the support and a posterior template slidably positionable along the guide member, the guide member and the posterior template having some of the femoral blade slots positionable adjacent the distal femur whereby the blade is guided to perform osteotomies.

12. (Currently amended) The ~~instrument~~ system of claim 11, wherein the cutting guide further comprises a posterior gauge capable of measuring the position of the posterior template.

13. (Currently amended) The ~~instrument~~ system of claim 12, wherein the cutting guide further comprises a distal template slidably positionable along the guide member, the distal template having some of the femoral blade slots positionable adjacent the distal femur whereby the blade is guided to perform osteotomies.

14. (Currently amended) The ~~instrument~~ system of claim 13, wherein the cutting guide further comprises a distal gauge capable of measuring the position of the distal template.

15. (Currently amended) The ~~instrument~~ system of claim 9, wherein the tibial guide comprises an elongate body member and a tibial template slidably positionable thereon, the body member adjustably mountable to the second end of the rod and positionable about the proximal end of the tibia, the tibial template positionable about the proximal end of the tibia and having some of the tibial blade slots therethrough positionable adjacent the proximal tibia whereby the blade is guided to perform osteotomies.

16. (Currently amended) The ~~instrument~~ system of claim 15, wherein the tibial guide further comprises a tibial gauge for measuring the position of the tibial template.

17. (Withdrawn) The ~~instrument~~ system of claim 9, wherein the cutting guide comprises a mount and a pair of cutting arms, the mount mountable to the support, the mount having a rail adapted to support the cutting arms, the cutting arms slidably positionable along the mount and having cutting surfaces positionable adjacent the distal femur whereby the blade is guided to perform osteotomies.

18. (Withdrawn) The ~~instrument~~ system of claim 17, wherein the cutting guide further comprises a second rail and a cutting block, the second rail positionable parallel to the first rail, the cutting arms slidably positionable along the first and second rails, the cutting block slidably positionable along the second rail between the cutting arms, the cutting block having a at least one femoral blade slot ~~slot~~ slots therethrough positionable adjacent the distal femur whereby the blade is guided to perform osteotomies.

19. (Currently amended) A surgical ~~instrument~~ system for orthopedic resection of a bone, comprising:

(a) an intermedullary support comprising an alignment rod, a plurality of longitudinal roller bearings, and an internal shaft therein, the alignment rod defining a longitudinal axis and having a tapered portion terminating at a first end thereof coaxially insertable into the medullary cavity of the bone and a second end extending beyond the bone, the tapered portion having an outer surface adapted to engage the bone and defining a plurality of longitudinal ~~blade~~ roller bearing slots therethrough positioned radially thereabout, each roller bearing located in a one of the

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longitudinal blade roller bearing slot slots and movable therein between a collapsed position and an expanded position, the internal shaft axially movable within the rod and adapted to engage the roller bearings, wherein at least a portion of each roller bearing extends a distance beyond the outer surface of the rod in the expanded position, wherein axial advancement of the shaft moves the roller bearings to the expanded position thereby extending the roller bearings into the bone so that the support is anchored therein in coaxial alignment therewith whereby the rod provides a surgical reference point; and

(b) a cutting guide adjustably mountable to the second end of the rod and positionable about an end of the bone, the cutting guide having a plurality of blade slots therethrough, each blade slot adapted to operatively receive a blade whereby the blade is guided to perform osteotomies.

20. (Currently amended) The ~~instrument~~ system of claim 19, wherein the cutting guide comprises a cutting guide member and a posterior template, the cutting guide member mountable to the support, the posterior template slidably positionable along the cutting guide member, the posterior template having some of the blade slots therethrough positionable adjacent the bone whereby the blade is guided to perform osteotomies.

21. (Currently amended) The ~~instrument~~ system of claim 20, wherein the cutting guide further comprises a posterior gauge capable of measuring the position of the posterior template.

22. (Currently amended) The ~~instrument~~ system of claim 21, wherein the cutting guide further comprises a distal template slidably positionable along the cutting guide member,

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the distal template having some of the blade slots therethrough positionable adjacent the bone whereby the blade is guided to perform osteotomies.

23. (Currently amended) The ~~instrument~~ system of claim 22, wherein the cutting guide further comprises a distal gauge capable of measuring the position of the distal template.

24. (Currently amended) The ~~instrument~~ system of claim 23, wherein the bone is a femur adjacent a tibia, wherein the instrument further comprises a tibial guide mountable to the support, non-simultaneously with the cutting guide, the tibial guide having a plurality of tibial blade slots therethrough adapted to positionably receive a blade whereby the blade is guided to perform osteotomies.

25. (Currently amended) The ~~instrument~~ system of claim 24, further comprising an elongate body member and a tibial locking arm slidably movable along the body member and adapted to engage the proximal end of the tibia whereby the tibia is secured perpendicular to the femur.

26. (Currently amended) The ~~instrument~~ system of claim 25, wherein the tibial guide comprises a tibial template slidably positionable along the body member, the tibial template having tibial blade slots therethrough positionable about the proximal tibia whereby the blade is guided to perform osteotomies.

27. (Currently amended) The ~~instrument~~ system of claim 26, wherein the tibial guide further comprises a tibial gauge for measuring the position of the tibial template.

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28. (Withdrawn) The ~~instrument~~ system of claim 19, wherein the cutting guide comprises a mount and a pair of cutting arms, the mount mountable on the support, the cutting arms slidably positionable along the mount, the cutting arms having cutting surfaces positionable adjacent the bone whereby the blade is guided to perform osteotomies.

29. (Withdrawn) The ~~instrument~~ system of claim 28, wherein the cutting guide further comprises a cutting block slidably positionable along the mount, the cutting block having a blade slot therethrough positionable adjacent the bone whereby the blade is guided to perform osteotomies.

The following is an examiner's statement of reasons for allowance: With respect to claim 9, U.S. Patent No. 5,601,563 to Burke et al. discloses an intermedullary support, a cutting guide, a tibial cutting guide, and a tibial locking arm. However, the reference fails to disclose or suggest a tibial locking arm that is "adapted to engage the proximal end of the tibia whereby the tibia is secured perpendicular to the femur." With respect to claim 19, the prior art fails to disclose or suggest all of the limitations of the claim including a plurality of longitudinal roller bearings positioned radially about the intermedullary support.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Jacob Davis whose telephone number is (703) 305-1232. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan T. Nguyen can be reached on (703) 308-2154. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DJD


DAVID O. REIP
PRIMARY EXAMINER